

Appln. No.: 10/672,236
Response Dated May 24, 2007
Reply to Office Action of February 26, 2007

GETL-100US

Remarks/Arguments:

Claims 1-23 are presently pending and all pending claims stand rejected. Applicants respectfully request reconsideration in view of the following remarks.

Section 4 of the Office Action recites "Claims 1-6, 16-19, and 22-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Heimsoth et al. (USPN 5,764,915) (hereinafter Heimsoth) in view of Broder et al. (USPN 5,991,808) (hereinafter Broder)." Applicants respectfully disagree and maintain that these claims are allowable over Heimsoth in view of Broder for the reasons set forth below.

Claim 1 is directed to a computer system for optimizing processing of an annotation request. Claim 1 includes the following features:

- a request processor configured to receive said annotation request from said client and to break said annotation request down into a plurality of constituent tasks;

- a task queue for storing the plurality of constituent tasks that need to be performed for said annotation request;

- a thread-controlling means for maintaining a plurality of threads;

- an assigning means for assigning said plurality of threads to said plurality of constituent tasks in said task queue; and

- task execution means for concurrently executing the plurality of constituent tasks in the respective plurality of threads on the request processor.

This means that annotation requests are received at a request processor, which breaks down the requests into constituent tasks. The constituent tasks are stored in a task queue. An assigning means assigns threads maintained by a thread controlling means to the task in the task queue. The computer system further includes task execution means for concurrently executing the plurality of constituent tasks on the request processor.

The Office Action indicates that Heimsoth discloses the recited tasks execution means of claim 1 at column 24, lines 37-63. Column 24, lines 37-63 of Heimsoth recite:

Also depicted in FIG. 8B is the process on the server side for assigning server thread in thread pool to service client requests and adjusting the number of threads in the pool. In step 611, a server threads is assigned to a client request for the duration of time required for processing the client request. In step 613 the (UnusedThreads) variable is decremented. A test is performed in step 615 to determine whether the number of threads in the thread pool is acceptable. The

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test if ((UnusedThreads)<(MinThreads) & (TotalThreads)<(MaxThreads)) is one test to perform this step. If the number of available threads in the thread pool is not acceptable, the management thread is signaled to increase the number of threads in the thread pool. The process ends in step 619.

The following psuedocode shows a possible implementation of these processes:

```
Client issues network request to the server
  If (ClientThreads)<(MaxReq),
    Send the request to the server.
  else
    Reject the network request

Assign server thread to service client request
Decrement (UnusedThreads)
If (UnusedThread)<(MinThread)&(TotalThread)<(MaxThread)
  Increase threads in the thread pool
```

Heimsoth is directed to an object oriented protocol for establishing communication paths between communication endpoints in a computer network. The server threads assigned in Heimsoth are used to establish these paths for communicating client requests.

Applicants previously argued that Heimsoth does not disclose task execution means for executing the plurality of constituent tasks in the respective plurality of threads. This is because the threads in Heimsoth et al. are not used for task execution but for session management. Applicant pointed to column 22, line 61 through column 23, line 7 of Heimsoth in support of this remark. In response, the Office Action recites:

this passage merely states that the client tasks (client requests) are sent before the threads are assigned. ... In addition, the claim recites that task execution is on the request processor (server) which in the server processes (executes) the task. This is exactly what Heimsoth discloses in which the tasks are executed on the server side (col. 22 line 61-col. line 7);

and that:

[w]ith respect to applicant's remark that thread in Heimsoth are not used for task execution but for session management, applicant to note that the thread sessions are associated with the tasks. The thread would not be needed/used if there were no tasks for processing."

The last sentence of the identified section recites "[t]hreads are assigned from the thread pool 549 so that the protocol stack 551 can handle the client requests out to the network 553," which clearly indicates that the threads are for session management and that execution of

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requests is not performed by the request processor as set forth in claim 1. The requests would thus be executed by a processor accessed via the network rather than by the request processor as indicated in the Office Action. Accordingly, Heimsoth discloses using threads to hand processing requests out over network, i.e., for execution on a computer other than the server assigning the threads. Therefore, Heimsoth fails to disclose, teach, or suggest "task execution means for concurrently executing the plurality of constituent tasks in the respective plurality of threads on the request processor," as recited in claim 1.

Further, as set forth in the prior response, Broder fails to disclose this feature as well.

Because neither Heimsoth et al. and Broder et al. nor their combination disclose, teach, or suggest this feature of claim 1, claim is not subject to rejection under 35 U.S.C. § 103(a) in view of Heimsoth et al. and Broder et al.

Claims 16 and 19, while not identical to claim 1, include features similar to claim 1. Accordingly, applicants contend that claims 16 and 19 are allowable for at least the reasons that claim 1 is allowable.

Claims 2-6 depend from claim 1; claims 17 and 18 depend from claim 16 and claims 22 and 23 depend from claim 19. Thus, these claims are not subject to rejection under 35 U.S.C. § 103(a) of Heimsoth et al. and Broder et al. for at least the same reasons as the claims from which they depend.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being obvious in view of Heimsoth et al., Broder et al. and Bahr et al.; claims 8 and 9 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Heimsoth et al., Broder et al. and Bauer; claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Heimsoth et al., Broder et al. and van Hoff; and claims 12-15, 20 and 21 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Heimsoth et al., Broder et al. and Spix et al. Applicants respectfully submit that none of the references relied upon in rejecting these claims include the feature discussed above with respect to claim 1. As these references fail to make up for the deficiencies of Heimsoth and Broder with respect to claim 1, applicants contend that claims 7-15, 20 and 21 are allowable as well.

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With regard to claim 15, applicants' attorney requests clarification of the "Official Notice" taken by the Examiner. The Office Action recites that an Official Notice is taken of:

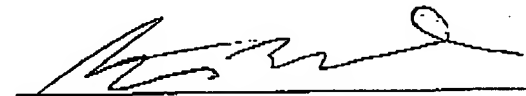
a computer system according to claim 14, wherein upon said notification one or more of said plurality of constituent tasks which require results from said executed I/O tasks are rendered ready for execution is considered well known and expected feature in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature such as to wait until a specific task has completed due to data dependencies and other related dependencies to as modified Heimsoth to satisfy the execution order.

Applicants' attorney is unclear as to what this statement means in terms of the Official Notice taken by the Examiner and requests clarification before acquiescing to the Official Notice.

In view of the foregoing remarks, applicants request that the Examiner reconsider and withdraw the rejection of claims 1-23.

Respectfully submitted,

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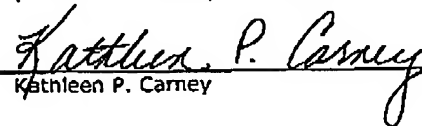
SJW/kpc

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I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office (571-273-8300) on May 24, 2007.


Kathleen P. Carney